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S/613/61/000/016/001/002
I045/I242

AUTHOR: Lepik, Yu. R.

TITLE: The load-carrying capacity of circular rigid plastic plates constructed of non homogeneous material

SOURCE: Akademiya nauk Estonskoy SSR. Institut fisiki i astronominii. Trudy, no. 16, Tartu, 1961. Issledovaniya po teoreticheskoy fisike, 3-14 /B

TEXT: The conception of a rigid-plastic body in combination with the Tresca yield criterion and associated flow rules is shown to be applicable to the calculation of collapse loads of non-homogeneous plates and shells. The author discusses the collapse of circular plates subjected to a concentric uniformly distributed load in the case of axially symmetric bending regard-

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The load-carrying capacity....

ing the yielding stress as a function of the plate coordinates $\sigma_y = \sigma_y(z, r)$. The following problems considered are: 1) the material of the plate has a yielding stress σ_y^+ under tension and σ_y^- under compression; 2) the yielding stress of the interior part of the plate remains constant, whereas a zone of thickness δ appears in the region of the exterior surface of the plate, where the material has an increased yielding stress; 3) the function characterizing the non-homogeneity of the plate changes according to the formula $M_s(r) = M_0(1 - x^r)$, where x is a given constant, $0 < x < 1$. This method of solution can be applied to the calculation of cylindrical and axially symmetric shells. There are 2 figures and 1 table.

SUBMITTED: February 24, 1961

Card 2/2

K. P. K. Yu. R.
KOROVSKIY, P. V.

PHASE I BOOK EXPLOITATION

SOV/6206 25

Konferentsiya po teorii plastin i obolochek. Kazan', 1960.

Trudy Konferentsii po teorii plastin i obolochek, 24-29 oktyabrya 1960. (Transactions of the Conference on the Theory of Plates and Shells Held in Kazan', 24 to 29 October 1960). Kazan', (Izd-vo Kazanskogo gosudarstvennogo universiteta) 1961. 426 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial. Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina.

Editorial Board: Kh. M. Mushtari, Editor; F. S. Isanbayeva, Secretary; N. A. Alumyaev, V. V. Bolotin, A. S. Vol'mir, N. S. Ganiyev, A. L. Gol'denveyzen, N. A. Kil'chevskiy, M. S. Kornishin, A. I. Lur'ye, G. N. Savin, A. V. Sachenkov, I. V. Svirskiy, R. G. Surkin, and A. P. Filippov. Ed.: V. I. Aleksagin; Tech. Ed.: Yu. P. Semenov.

PURPOSE: The collection of articles is intended for scientists and engineers who are interested in the analysis of strength and stability of shells.

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Transactions of the Conference (Cont.)

SOV/6206
75

COVERAGE: The book is a collection of articles delivered at the Conference on Plates and Shells held in Kazan' from 24 to 29 October 1960. The articles deal with the mathematical theory of plates and shells and its application to the solution, in both linear and nonlinear formulations, of problems of bending, static and dynamic stability, and vibration of regular and sandwich plates and shells of various shapes under various loadings in the elastic and plastic regions. Analysis is made of the behavior of plates and shells in fluids, and the effect of creep of the material is considered. A number of papers discuss problems associated with the development of effective mathematical methods for solving problems in the theory of shells. Some of the reports propose algorithms for the solution of problems with the aid of electronic computers. A total of one hundred reports and notes were presented and discussed during the conference. The reports are arranged alphabetically (Russian) by the author's name.

Card 2/14

KEPIN, T.K.; ALEXANDROV, N.F.; KULIK, A.M., etv. red., MAKOCOM VA,
I.A., tekhn. red.

[Bibliography on the use of radioactive and stable isotopes
in biology for 1950-1958] Uzazatel' literatury po primeneniiu
radioaktivnykh i stabil'nykh izotopov v biologii za 1950-
1958 gg. Moskva. Izd-vo Akad. nauk SSSR, 1962. 406 p.

(MIRA 16:2)

1. Akademiya nauk SSSR. Sektor seti spetsial'nykh bibliotek.
2. Chlen-korrespondent Akademii nauk SSSR (for Kuzin).
(Bibliography--Radiobiology) (Bibliography--Isotopes)

Transactions of the Conference (Cont.)

Kordashenko, A. B. Solution of the Dynamic Problem for Sector-Shaped and Tapered Plates	sov/6206 13
Kornishin, M. S., and D. A. Kusimova. On a Method for Solution of Systems of Nonlinear Finite-Difference Equations of Bonding of Plates	186
Kornishin, M. S., and E. N. Safiullina. Application of the Method of Successive Approximations to the Investigation of Large Deflections of a Circular Plate and an Extremely Shallow Spherical Segment	191
Kosukhin, A. K. On the Problem of Analysis of Thin-Walled Three-Dimensional Structures as Systems of Joined Plates	199
Kurshin, L. M. Stability of Wing Panels Under Unsteady Aerodynamic Heating	204
Lepik, Yu. R. Large Deflections of Circular Rigid-Plastic Plates Clamped by Their Circumference	209
Card 8/14	215

S/613/62/000/019/001/006
B108/B186

AUTHOR: Lepik, Yu.

TITLE: A dynamical problem in the theory of plates

SOURCE: Akademiya nauk Estonskoy SSR. Institut fiziki i astronomii
Trudy. no. 19. 1962. Issledovaniya po teoreticheskoy
fizike, 25-34

TEXT: A circular elastic plate (radius a, thickness h) has in its central region a rigid, cylindrical body (radius b), fastened to the center. Its outer edge is accelerated with $j(t)$. The deformation of the plate and the acceleration j_1 of the rigid body is sought. The inertia of the plate and of the rigid body is neglected. This problem is represented by the

equation
$$Q \frac{\partial^3 w}{\partial Q^3} + \frac{\partial^2 w}{\partial Q^2} - \frac{1}{Q} \frac{\partial w}{\partial Q} + k \left\{ \begin{array}{l} \frac{w}{\beta} \\ \frac{d}{\beta} \end{array} \right\} \ddot{w} = - \frac{ma^2}{2\pi D} \ddot{w}_b, \text{ where } Q = r/a,$$

 $\beta = b/a, D$ is the rigidity of the plate, $k = \frac{h\delta a^4}{D}$, δ is the density of

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S/613/62/000/019/001/006
B108/B186

A dynamical problem in the ...

the plate. $w = w(q, t)$ is the displacement along the plate axis, $w^b = w(\beta, t)$ the displacement of the rigid body. The boundary conditions are

$$w = w^a, \frac{\partial^2 w}{\partial q^2} + \frac{\nu}{Q} \frac{\partial w}{\partial q} = 0 \text{ for } q = 1 \quad (\nu \text{ is Poisson's ratio}), \frac{\partial w}{\partial q} = 0 \text{ for } q = \beta.$$

The initial conditions are $w(q, 0) = \dot{w}(q, 0) = 0$. The solution is found by expanding in powers of the small parameter k , and under the assumption that the deformation $w^a - w^b$ is small (no plastic deformation). The conditions for elastoplastic and plastic deformation are also considered. There is 1 table.

SUBMITTED: February 20, 1962

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L 20138-63 EWP(r)/BDS
ACCESSION NR: AF3004311

S/0179/63/000/004/0167/0171

X B

AUTHOR: Lepik, Yu. R. (Tartu)

TITLE: The carrying capacity of inhomogeneous plates and shells

SOURCE: AN SSSR. Izv. Otd. tekhn. nauk. Mekhanika i mashinostroyeniye, no. 4, 1963, 167-171

TOPIC TAGS: carrying capacity, inhomogeneous shell, inhomogeneous plate

ABSTRACT: The studies related to the problem stated in the title are of a recent origin (W. Olszak and W. Urbanowski, Plastic non-homogeneity, Pergamon Press, 1959; A. S. Grigor'yev, Arch. mechaniki stosevanej, 1961, vol 13, No. 5). The present paper is a continuation of a previous paper (Tr. In-ta fiz. i astr. AN Estonskoy SSR, 1961, No. 16) showing that in the case of axially-symmetric deformations this problem can be solved exactly (i.e., one can find solutions whose upper and lower limits of the critical loads coincide). The author solves 1) the carrying capacity of a spherical surface under uniform pressure (the surface is very thin and, consequently, Kirchhoff's hypothesis is applicable) with axially symmetric bending and 2) the same problem for a cylindrical shell

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L 20138-63

ACCESSION NR: AP3004811

subjected to inner pressure. The solutions are also applicable in case of uniform surfaces and shells of variable thickness, and for materials which have different fluidity limits under tensile and compressive stresses. Simplified cases agree with some previously solved problems (see, e.g., P. G. Hodge, J. Appl. Mech., 1954, vol. 21, No. 4). Orig. art. has: 10 figures and 25 equations.

ASSOCIATION: none

SUBMITTED: 09Sep62

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: AP

NO REF Sov: 004

OTHER: 004

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LEPIK, YU.R. (Tartu)

"Thermal stresses in flexible non-homogeneous plates beyond the elastic limit".

report presented at the 2nd All-Union Congress on Theoretical and Applied
Mechanics, Moscow, 29 Jan - 5 Feb 64.

LEPIK, Yu.R. (Tartu)

Equilibrium of elastoplastic and rigidly plastic plates and shells.
Inzh.zhur. 4 no.3:601-616 '64. (MIR) (7-17)

LEPIKA, M.; BOGOLUBOVA, N.; ARSE, E.

Petera Stuckas Latvijas valsts universitates Zinatniskie raketi,
v 25, 1958; a review of a periodical. Vestis Latv ak no.1:179-186
'60. (EEAI 9:11)
(Latvian periodicals)

LAGUNOV, L.L., kand.tekhn.nauk; MROCHKOV, K.A., kand.tekhn.nauk; GOLOVIN, A.N.,
inzh.; LEPIKASH, G.F., inzh.

Using the mechanical impulse method for obtaining vitamin A from
whale liver. Trudy VNIIRO 45:115-122 '62. (MIRA 16:5)
(Vitamins—A) (Whale products)

LEPIKHIN, Avenir Valerianovich; MANTEYFEL', P.A., red.

[Sport hunting; handbook based on the practice of the Army
Hunting Society] Sportivnoe okhotnich'e khoziaistvo; spravochnoe
posobie iz opyta Voenno-okhotnich'ego obshchestva. Pod red.
P.A.Manteifelia. Moskva, Voen.izd-vo, 1959. 143 p.
(MIRA 15:10)

(Wildlife, Conservation of) (Hunting)

LYSENKO, T.D.; PAPANIN, I.D.; POZDNYAKOV, Ye.V.; VARUNTSYAN, I.S.;
PREZENT, I.I.; LEPIKHIN, A.V.; GRIBANOV, R.N.; YUDIN, V.M.;
GERCHIKOV, N.P.; KORYAZHNOV, V.P.; VSYAKIKH, A.S.; IL'INA, Ye.D.

In memory of Petr Aleksandrovich Manteifel'. Agrobiologija
(MIRA 13:12)
no. 3:453-454 My-Je '60.
(Manteifel', Petr Aleksandrovich, 1882-1960)

LEPIKHIN, K.F.; RYABINKIN, A.M. (Omsk)

Evaluation of some methods of pulpitis treatment. Stomatologija
35 no.1;56 Ja-F '56. (MLRA 9:6)
(TEETH--DISEASES)

LEPIKIN, N. F., Master Med Sci --(abs) "On the osteosynthesis of a lower jaw fracture." (Experimental research). Ussr, 1957, 12 pp. (Ussr State Med Inst na. M. I. Klinin). Dept of faculty surgery), 100 copies. (KL, No 40, 1957, p. 25)

LEPIKHIN, K.F., kand.med.nauk

Preparing a splint of quick-setting plastic for the stabilization
of the frontal teeth in paradentosis. Stomatologija 41 no.5:
80-82 S-0 '62. (MIRA 1614)
(DENTISTRY, OPERATIVE) (PLASTICS IN MEDICINE)
(GUMS—DISEASES)

LEPIKHIN, K.F., dotsent

Extraoral fixation of prosthesis on an edentulous mandible
during meals. Stomatologija 42 no.2:69-71 Mr-Ap'63
(MIRA 17:3)

1. Iz kafedry ortopedicheskoy stomatologii Omskogo mediteinskogo instituta imeni M.I.Kalinina.

LEPIKHIN, Konstantin Filippovich, dots.; YUKHNOVSKAYA, S. I.,
red.

[How to preserve healthy teeth] Kak sokhranit' zdorovye
zuby. Moskva, Meditsina, 1965. 29 p. (MIRA 18:12)

LEPIKHIN, L.; KYRCHIKOV, A.

Faulty practice in planning the cost of industrial production.
Fin. SSSR 17 no.9:72-74 S '56. (MLRA 9:10)

(Bashkiria--Costs, Industrial)

LEFIKHIN, L.A.

Durability of blast furnace hearth bottoms. Metallurg
10 no.1:8-11 Ja '65. (MIRA 18%)

GALEMIN, I.M., kand.tekhn.nauk; LAPIKHIN, L.A., inzh.

Durability of the brickwork in blast furnace stacks of the
Magnitogorsk Metallurgical Combine. Stal' 22 no.3:215-218
Mr '62. (MIRA 15:3)

1. Chelyabinskii nauchno-issledovatel'skiy institut metallurgii i
Magnitogorskiy metallurgicheskiy kombinat.
(Magnitogorsk--Blast furnaces--Design and construction)

AUTHOR: Lepikhin, L.A., Engineer at the Magnitogorsk Metallurgical Combine. ²³³

TITLE: Working conditions of the inter-bell space of a blast furnace. (Rezhim raboty mezhkonusnogo prostranstva domennoy pechi.)

PERIODICAL: "Metallurg" (Metallurgist), 1957, No. 1, pp. 13 - 14, (U.S.S.R.)

ABSTRACT: Recent changes in practice (high top pressure, higher proportion of sinter) have put an increased strain on blast furnace charging mechanisms and the chance of inter-bell explosions has increased. Magnitogorsk charging-mechanism practice and investigations carried out there on the inter-bell space are described in this article. 1.3 to 1.5 tons per hour of steam are admitted continuously to the inter-bell space in which the pressure rises to 0.3 atm. gauge before the opening of the exhaust valve and filling. Tests showed that up to 75% of air tends to accumulate in the space during dumping on the small bell, the oxygen content falling to 2 - 7% when the space is "filled" with gas; the different "dry" compositions and pressures of the gas in the inter-bell space for a charging cycle ore/ore/coke/coke with hot sinter, for the same with washed ore and for coke/ore/ore/coke with hot sinter are tabulated. The explosive nature of the mixtures is particularly dangerous with hot sinter. For

Working conditions of the inter-bell space of a blast furnace. (Cont.)

²³³

unexplained reasons, up to 40% CO is obtained occasionally. Possible ways of reducing steam consumption are discussed 2 tables.

AUTHORS: Lepikhin, L.A. and Shparber, L.Ya., Engineers
SOV/133-58-6-5/33

TITLE: A New Method of Supply of Steam into the Space between
Bells of Blast Furnaces (Novyy sposob podachi para v
mezhkonusnyye prostranstva domchnykh pechey)

PERIODICAL: Stal', 1958, Nr 6, p 503 (USSR).

ABSTRACT: An illustrated outline of a system of supply of steam
between small and large bells synchronised with charging side
is given. The system is in operation and an improved safety
and an economy in steam is claimed. The main feature - steam
is supplied only just before the opening and during the closing
of the large bell. There are 2 figures.

ASSOCIATION: Magnitogorskiy metallurgicheskikh kombinat
(Magnitogorsk Metallurgical Combine)

Card 1/1 1. Blast furnaces--Performance 2. Steam--Applications

BABARYKIN, N.N., kand.tekhn.nauk; GALEMIN, I.M., kand.tekhn.nauk
LEPIKHIN, L.A., inzh.

Temperature and composition of the cast iron in the broken-down
part of a blast furnace hearth bottom [with summary in English].
Stal' 21 no.3:198-200 Mr '61.
(MIRA 14:6)

1. Magnitogorskiy metallurgicheskiy kombinat i Chelyabinskii
nauchno-issledovatel'skiy institut metallurgii.
(Blast furnaces--Maintenance and repair)

GALEMIN, I.M., kand.tekhn.nauk; LEPIKHIN, L.A., inzh.

Brickwork durability in blast furnace hearths and hearth bottoms
of the Magnitogorsk Metallurgical Combine. Stal' 21 no.10:874-877
(MIRA 14:10)
O '61.

1. Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii
i Magnitogorskiy metallurgicheskiy kombinat.
(Magnitogorsk--Blast furnaces)

GALEMIN, I.M.; SAGAYDAK, I.I.; LEPIKHIN, L.A.

Service of grog and high-alumina firebrick in blast furnace
stacks. Ogneupory 27 no.9:403-408 '62. (MIA 15:8)

1. Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii (for
Galemin). 2. Magnitogorskiy metallurgicheskiy kombinat (for
Sagaydak, Lepikhin).
(Firebrick)

LEPIKHIN, L.A., inzh.; Prinimali uchastiye: STEFANOVICH, M.A., doktor tekhn.nauk; BABARYKIN, N.N., kand.tekhn.nauk; NEYASOV, A.G., kand.tekhn.nauk; SHPARBER, L.Ya., inzh.; BOGDANOV, V.V., inzh.; ZHARKOV, P.N., master pechi; PANIK, O.G., master pechi; FEDOTOV, V.G., master pechi; FEOFANOV, N.M., master pechi; SAGAYDAK, I.I., inzh., rukovoditel'raboty

Evaluating the effect of various methods of charging a blast furnace on the state of the gas flow in its upper part. Stal'
(MIRA 17:5)
23 no. 3:198-204 Mr '64.

1. Magnitogorskiy metallurgicheskiy kombinat (for Lepikhin).

LEPIKHIN, M.N., red.; SOKOLOVA, S.I., tekhn.red.

[Over-all mechanization of lumbering enterprises] Kompleksnaya
mekhanizatsiya na lesozagotovkakh. Vologda, Vologodskoe knizhnoe
izd-vo, 1960. 69 p.
(MIRA 13:12)
(Lumbering--Machinery)

NOV/26-58-12-13/44

AUTHOR:

Lepikhin, P.A.

TITLE:

In the Depths of Antarctica (v glutine Antarktidy). From the
Notes of a Polar Researcher (Iz zapisok polyarnika)

PERIODICAL:

Priroda, 1958, Nr 12, pp 79-86 (USSR)

ABSTRACT:

Following a brief survey of expeditions to and in the Antarctica in the 20th century, the author describes the road to and establishment of the third Soviet Antarctic station Vostok-1 at 7209S/9633.5E at an altitude of 3380 m above sea level, performed by members of the Second Antarctic Expedition of the AS USSR. The group consisted of 5 members plus 3 later arrivals and comprised the station head V.G. Averyanov, the technician and radio operator S.Ye. Polyakov, the meteorologists V.K. Shimanovich and V.A. Teterin, radar engineer I.G. Yevstifeyev, mechanic P.A. Lepikhin, driver V.M. Tsvetkov and the doctor and cook V.N. Aleksandrov. Later on Shimanovich and Aleksandrov were exchanged for the physician I.I. Tikhomirov and the aerologist V.K. Kilyashov flown there from Mirnyy station by P. Vinogradov. Other flights directed by A.F. Treshnikov carried fuel for the sledge-and-tractor vehicles from Mirnyy to Vostok-1 for the establishment of intermediate stations. The narrative covers

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SOV/26-58-12-13/44

In the Depths of Antarctica. From the Notes of a Polar Researcher.

the time between 28 February 1957 and January 1958 with diary-like entries mainly on meteorological phenomena observed during the advance to and at the new site. It ends with the arrival of the two vessels of the Third Antarctic Expedition in Mirnyy together with the relief headed by Ye.I. Tolstikov.

There are 3 photos.

ASSOCIATION: Vtoraya kompleksnaya antarkticheskaya ekspeditsiya AN SSSR
(The Second Joint Antarctic Expedition of the AS of the USSR)

Card 2/2

LIPSKIY, Yu.N.; BONDARENKO, L.N.; LEPIKHIN, R.S.; LYASHCHENKO, V.P.;
POSPERGELIS, M.M.; SUGROBOV, N.K.

New means of astronomic observations; study of celestial bodies
by means of television. Priroda 52 no.7:96-99 J1 '63.
(MIRA 16:8)

1. Astronomicheskiy institut im. P.K.Shternberga, Moskva.
(Television in astronomy)

LEPIKHOV, A.G., gornyy inzh.

Support of ventilation drifts without leaving coal pillars.
(MIREA 12:1)
Ugol' Ukr. 3 no.1:28-29 Ja '59.
(Mine ventilation) (Mine timbering)

LEPIKHOV, A.G.

Once more on IA.Z.Bukhman's book "Mine ventilation."
Besop.truda v prom. 3 no.10:37 O '59. (MIRA 13:2)

1. Glavnnyy inzhener shakhty "Proletarskaya-Krutaya,"
G.Makayevka, Donbass,
(Mine ventilation) (Bukhman, IA.Z.)

LEPIKHOV, A.G., gornyy inzh.

Readers' response to G.S.Khomyllov's article "Earth sliding in
the central part of the Donets Basin." *Ugol'* 34 no.7:58-59
Jl '59. (MIRA 12:10)

1. *Shakhta "Proletarskaya-Krutaya."*
(Donets Basin--Subsidence (Earth movements))
(Khomyllov, G.S.)

LAPIKHOV, A.G., gornyy inzhener

Further discussion concerning the support of ventilation drifts
in mining steeply pitching seams. Ugol' Ukr. 4 no. 11:31 N '60.
(MIRA 13:12)

(Mining engineering)

LEPIKHOV, A.

Need for experiment stations. Sov.shakht. 10 no.4:15 Ap '61.
(MIRA 14:9)

1. Glavnnyy inzh. shakhty "Proletarskaya-Krutaya".
(Coal mining machinery--Technological innovations)

LEPIKHOV, A.G., gornyy inzh.

Support of mine workings in hazardous rocks subjected to swelling.
Ugol' Ukr. 6 no.9:34 S '62. (MIRA 15:9)
(Mine timbering)

LEPIKHOV, A.G.

Readers' replies to the article by K.A. Efremov "Gas conditions
in coal mines and their categories according to the gas content."
Bezop. truda v prom. 7 no.12:30 D '63.

(MIRA 18:7)

1. Nachal'nik shakhty "Proletarskaya-Krutaya", Donbass.

LEPIKHOV, V.M.; POLEVODIN, Ye.I.

Automation of drainage systems with low voltage electric motors.
Ugol' Ukr. 5 no.7:34-36 Jl '61. (MIRA 15:1)

1. Glavnny energetik tresta Kirovugol' Luganskogo ekonomicheskogo
rayona (for Lepikhov). 2. Zamestitel' glavnogo inzhenera shakty
"Novo-Pavlovskaya" tresta Krasnoluchugol' (for Polevodin).
(Mine drainage) (~~Automatic control~~)

L. V. Kozlov
Add. Info.:

Author: A. V. Kozlov; N. A. Mikhalevich; V. G. Tsvetkov; I. S. Dzhurik; I. I.

G.S.: none

✓
TITLE: Effect of rapidly increasing hypoxia on the human organism [Paper presented at conference on problems of space medicine held in Moscow from 26-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 10-II

TOPIC TAGS: hypoxia, spirography, electrocardiogram, human physiology

ABSTRACT:

In order to determine the time available for taking countermeasures during a rapid drop in partial oxygen pressure, the resistance of the body to rapidly increasing hypoxia was studied in 26 human subjects by the respiration method using a spirograph filled at the start with 8.5 l of atmospheric air. The O₂ content of this air decreased as the oxygen was used up; CO₂ was chemically absorbed.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929320005-1"

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L 08271-57

ACC NR: M669/11

The external appearance of the subjects, their behavior, and reported subjective sensations were monitored as a check on their general condition; data were recorded on conditioned reflex activity, brain bio currents, motor coordination, the functional state of the cardiovascular and respiratory systems and blood oxygen absorption levels; and studies of the composition of peripheral blood and the functional state of the adrenal cortex were made.

The results showed that rapidly increasing hypoxia produces functional changes leading to loss of consciousness if oxygen is not quickly administered. Reserve time (time from beginning to breathe the hypoxic mixture until the hypoxic mixture is cut off) amounted on the average to 6 min 28 sec (5 min 27 sec to 10 min 02 sec). This was equivalent to an "altitude ceiling" of 10150 m (9100 to 11400 m). The O₂ content in the respired air at the end of the experiment was 4.44% ($\text{pO}_2 = 31.3 \text{ mm Hg}$); blood oxygen saturation dropped to an average of 53.2% (42% to 64%). Key symptoms observed during the experiment included: cyanosis of the epidermis and mucosa; dyspnea, drowsiness, impaired handwriting, and sometimes even muscle spasms in the hands. Many subjects complained of respiratory distress, giddiness, dimness of vision, heat, headache, etc.

L-96271-67

...and increased. The subjects were required to solve arithmetic problems, read and calculate, etc., and the time required to solve, errors made and the number of errors increased more than three-fold over initial data.

Three phases were distinguished in EEG changes: 1) suppression of the alpha rhythm; 2) reactivation of alpha rhythm; 3) onset of slow waves (2 to 4 per incl).

Frequency and depth of respiration and minute volume increased during hypoxia, and the oxygen requirement and O₂ utilization coefficient decreased. Arterial oxygen saturation decreased from 96% to 93% at the start to 49% to 55% at the end of the experiment.

ECGs made during rapidly increasing hypoxia showed a progressive increase in the pulse rate and a decrease in the amplitude of R and T waves.

Peripheral blood composition immediately and one hour after exposure to hypoxia showed increased erythrocyte counts and hemoglobin content. The amount of 17-or_o-corticosteroids in the plasma increased from 16 to 17.7% at the onset of 5.3 to 64.2 Y % during the aftereffect period.

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Sect DATE: 00May66

S/081/62/000/013/042/054
B156/B101

AUTHORS: Radushnova, T. A., Lepikhova, L. A., Zhuraleva, Ye. S.

TITLE: A new standard for petroleum bitumens

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 532, abstract
13M190 (Str-vo truboprovodov, no. 12, 1961, 11)

TEXT: A SOCT (GOST) Standard for petroleum bitumens used in insulating oil and gas pipe lines has been prepared. This Standard provides for three grades of bitumen, more stringent requirements being made as regards needle penetration depth, extensibility, and softening point for the 5H-I-IV (BNI-IV) and 5H-I-V (BNI-V) bitumens. The BNI-IV-3 (winter) grade bitumen which has restricted paraffin (< 4 %) and sulfur (0.2 %) contents has been introduced for all-the-year-round insulation purposes. Additional requirements are introduced restricting the saturation with water over 24 hours. [Abstracter's note: Complete translation.]

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IZOTOVA, M.A., ; LEPIKOVA, M.F., inzh.; KHOKHLOVA, N.D., inzh.;
CHERKASHINA, M.F., spets. red.; VOLKOVA, S.N., otv. za izdaniye;
TISHCHENKO, N.I., red.; KARITONOVА, L.I., tekhn. red.

[Typical methods of sewing light women's and children's custom-made dresses] Tipovye metody poshivki legkogo zhenskogo i detskogo plat'ia po individual'nym zakazam. 2., dop. i perer. izd. Moskva, Gosmestpromizdat, 1961. 237 p. (MIRA 15:7)

1. Moscow. TSentral'naya optyno-tehnicheskaya shveynaya laboratoriya. 2. TSentral'naya optyno-tehnicheskaya shveynaya laboratoriya Gosudarstvennogo komiteta Soveta Ministrov RSFSR po delam mestnoy promyshlennosti i khudozhestvennykh promyslov (for Lepikhova, Khokhlova). 3. Glavnyy inzhener TSentral'noy optyno-tehnicheskoy shveynoy laboratorii Gosudarstvennogo komiteta Soveta Ministrov RSFSR po delam mestnoy promyshlennosti i khudozhestvennykh promyslov (for Izotova). (Clothing industry)

IZOTOVA, M.A., glav. inzh.; KONTORER, R.B., inzh.; LEPIKHOVA, M.F., inzh.;
TITKOVA, Z.V., inzh.; CHERKASHINA, M.F., spets. red.; VOLKOVA,
S.N., otv. za izdaniye; KHARITONOVA, L.I., tekhn. red.

[Flow charts for work distribution in the sewing of women's and
men's custom-made outerwear] Skhemy razdeleniya truda na poshivku
zhenskoi i muzhskoi verkhnei odezhdy po individual'nym zakazam;
sbornik. Moskva, Gosmestpromizdat, 1961. 490 p. (MIR 15:7)

1. Moscow. TSentral'naya opytno-tehnicheskaya shveynaya laborato-
riya. 2. TSentral'naya opytno-tehnicheskaya shveynaya laboratoriya
Gosudarstvennogo komiteta Soveta Ministrov RSFSR po delam mestnoy
promyshlennosti (for Isotova, Kontorer, Lepikhova, Titkova).
(Clothing industry)

USSR/Medicine - Antibiotics

FD-2319

Card 1/1 Pub 148 - 20/36

Author : Glazman, M. G.; Lepikhova, L. P.

Title : Ekmolin as a factor which reinforces the action of penicillin on
resistant staphylococcus cultures

Periodical : Zhur. mikro. epid. i immun. No 2, 58, Feb 1955

Abstract : Found that penicillin to which ekmolin has been added has a bacteriostatic effect on staphylococci cultures that are otherwise resistant to penicillin and that penicillin and ekmolin exert a synergistic bacteriostatic action on staphylococci cultures.

Institution : Hospital imeni Bauman, Moscow

Submitted : March 18, 1954

LEPIKHOVA, M. F.

KUTYREVA, V.P.; KAPLAN, S.L., PIMENOVA, V.M.; GVOZDEVA, A.I.; TITKOVA, Z.V.;
LICHITSKIY, V.I.; LEPIKHOVA, M.F.; BIRLYANT, I.Ya., redaktor;
TSIRUL'NITSKIY, N.P., tekhnicheskiy redaktor

[Standard operations involved in trimming; a collection] Tipovye
tekhnologicheskie protsessy proizvodstva otdelok; sbornik. Moskva,
Vses.koop.isd-vo, 1957. 94 p. (MIRA 10:7)

1. Russia (1917- R.S.F.S.R.) Sovet promyslovoy kooperatsii.
TSentral'naya optychno-tehnicheskaya shveynaya laboratoriya.
(Dressmaking)

PILYUGIN, G.T.; LEPIKHOVA, S.V.

Synthetic dyes. Part 42: Condensation of N-aryl quinaldinium salts with acetanilinomethylenerhodanine. Zhur. ob. khim. 35 no.4:647-649 Ap '65. (MIRA 18:5)

1. Chernovitskiy gosudarstvennyy universitet.

L 3573-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/GG
ACCESSION NR: AP5024816 UR/0032/65/031/010/1219/1222
519.24 41

AUTHOR: Kaganovskiy, I. P.; Okun', L. S.; Ovodova, A. V.; Ryabykina, L. V.;
Lepikhova, Ye. Ye. 5544 5544 5544 5544 5544 41 37 38 B

TITLE: Macrostructural standards for using dislocation density to evaluate non-uniformity in germanium single crystals 33, 21

SOURCE: Zavodskaya laboratoriya, v. 31, no. 10, 1965, 1219-1222

TOPIC TAGS: germanium single crystal, semiconductor single crystal, metal inspection, metal test

ABSTRACT: A visual method is proposed for evaluating nonuniformity in germanium crystals according to the appearance of etched thin sections. The visual forms of the macrostructures on specimens of this type are divided into five classes: uniform, ring-type, ring-star, star and slip band. A photograph is given illustrating each category. The nomenclature refers to the distribution of pits caused by etching of the samples. Each of these types of distribution is associated with a definite relationship between axial and radial temperature gradients at the crystallization or growth front of the crystal. The entire surface of several typical specimens from each of these groups was studied under a 100x metallurgical microscope.

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L 3573-66

ACCESSION NR: AP5024816

Assuming that the number of dislocations falling into the cells of the reticle is a random quantity, the average values and fluctuation coefficients of this quantity were calculated as an index of microscopic nonuniformity in the specimen. The macroscopic nonuniformity was evaluated by isolating localized regions on the reticle with various dislocation densities according to the visual categories. The coefficient of variation between the values of the average dislocation density in the isolated regions is an index of the macroscopic nonuniformity of the specimen. The results showed satisfactory agreement between the coefficients of variation of the macroscopic and microscopic nonuniformity for specimens belonging to the same visual class. Thus standards were developed for evaluating nonuniformity in single crystals of germanium. It is recommended that a pattern recognition electronic device should be developed for use with the proposed method to eliminate human errors resulting from the use of inspection personnel. Orig. art. has: 3 figures, 1 table.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti (State Design and Planning Scientific Research Institute of the Rare Metals Industry) ⁴⁴

SUBMITTED: 00

NO REF Sov: 001

5 ENCL: 00

OTHER: 000

SUB CODE: MM, SS

Card 2/2

L 3572-66 ENT(1)/ENT(m)/ENP(w)/T/ENP(t)/EWP(b)/EMA(c) LJP(c) D/GG
ACCESSION NR: AP5024817 UR/0032/65/031/010/1222/1224
519.24 36
33
B

AUTHOR: Kaganovskiy, I. P.; Okun', L. S.; Lepikhova, Ye. Ye. 44
55 49 55 53 33 18

TITLE: Metrologic determination of nonuniformity in germanium single crystals
according to resistivity 53, 17

SOURCE: Zavodskaya laboratoriya, v. 31, no. 10, 1965, 1222-1224

TOPIC TAGS: germanium single crystal, semiconductor single crystal, metal inspection, metal test, resistivity

ABSTRACT: Resistivity was measured along the generatrix and through the cross sections of 22 germanium single crystal specimens 28 ± 1 mm in diameter and 220 ± 10 mm long to develop method for evaluating the average value and resistivity as qualitative parameters of crystals to be used in making semiconductor devices. The results of the measurements were used for calculating the mean values \bar{x}_{pl} and the coefficients of variation v_{pl} of the resistivity along the generatrix, the mean values \bar{x}_{ps} and coefficients of variation v_{ps} of the resistivity in the cross section, and for plotting graphs showing the variation in these parameters along the

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L 3572-66

ACCESSION NR: AP5024817

crystals. An analysis of these graphs showed that the variations in resistivity along the generatrix are strongly oscillatory in nature with an amplitude of 15%. In addition to this, the average resistivity along the generatrix exceeds that in the cross section by 15% which may be due to high evaporation of the impurity from the surface of the crystal during growth. This reduces the reliability of resistivity measurements along the generatrix for determining the distribution of resistivity through the crystal. On the other hand, the average resistivity shows a linear reduction within 3% in the cross sections along the cylindrical part of the crystal. Thus, if the average resistivity is known in the initial and final sections, the law of its variation along the crystal may be determined. Methods were then developed for selective evaluation of the average resistivity and the coefficient of variation in the cross section. The resistivities at fixed points in the cross section were considered as a random quantity, and the mean and root-mean-square deviations were calculated from a sample space of 120 points. Typical distribution polygons are shown for three cross sections of the same crystal. It is found that ten measurements uniformly distributed throughout the cross section give sufficient accuracy for practical purposes in evaluating the average resistivity (3%) and the coefficient of variation (5%). The mean coefficient of variation in resistivity in several cross sections may serve as a measure of the nonuniformity of the crystal and be used as an optimizing parameter. Orig. art. has: 2 figures.

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L 3572-66

ACCESSION NR: AP5024817

3

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut
redkometallicheskoy promyshlennosti (State Design and Planning Scientific Research
Institute of the Rare Metals Industry) 44,65

SUBMITTED: 00

ENCL: 00

SUB CODE: SS

NO REF Sov: 000

OTHER: 000

Card 3/3

LEPIKINA, L.A.

USSR/Physical Chemistry - Colloid Chemistry.
Disperse Systems

B-14

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4036

Author : Lepikina L.A.

Title : Effect of Moisture on Changes of Structural and
Mechanical Properties of Gelatin During Drying.

Orig Pub : Kolloid. zh. 1956, 18, No 3, 302-309.

Abstract : In connection with elucidation of mechanism of physicochemical changes in structure during drying a study is made of the structural and mechanical properties of gelatin containing from 130 to 670 parts water per 100 parts gelatin, at temperatures of 10-35°. By means of the author's modification of an apparatus of the previously described type (Gorazdovskiy T.Ya., Zavod. laboratoriya, 1949, No 5) curves were recorded of the correlation between tangential stresses and relative shearing deformation and of deformation kinetics at constant stress. Boundaries are traced

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LEPIKSAAR, J.: ZASTROV, M.

The nonenclature of bird's names in Estonian (To be contd.) p.48.

TULIMULD (Eesti PEN-klubi, Valismaine Eesto Kirjunike Liit,
Ulemaailmne Eesti Kirjanduse Selts) Lund. Estonia.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 12, Dec. 1959

Uncl.

KOSTAL, Rostislav; HOREJS, Jiri; VEJSADA, Frantisek; LEPIL, Oldrich;
PECINA, Vaclav; LAITOCHE, Miroslav; VESELY, Frantisek;
KLEIN, Tomas

The activities of the Association of Czechoslovak Mathematicians
and Physicists. Pokroky mat fyz astr 7 no.4:252-258
'62.

LEPIL, Oldrich; SVOBODA, Josef; CERNY, Gabriel; PECINA, Vaclav; PROCHAZKA, Jiri

Activities of the branches of the Association of Czechoslovak Mathematicians and Physicists. Pokroky mat fyz astr 7 no.6: 370-373 '62.

VEJSADA, Frantisek (Ceske Budejovice); LEPIL, Oldrich (Gottwaldov);
SIMEK, Frantisek (Liberec); VESELY, Frantisek (Plzen); BURES,
Jarolim

Reports from branch organizations. Pokroky mat fyz astr 8
no.4:254-258 '63.

HUSTY, Zdenek (Brno); LEPIL, Oldrich (Gottwaldov); BABLIK, Vaclav (Karlovy Vary); MIKUSKA, Jindrich (Ostrava); KLATIL, Jiri (Plzen); HRADECKY, Frantisek (Praha); KLEIN, Tomas (Zvolen)

Reports from branches. Pokroky mat fyz astr 8 no.5:306-312 '63.

HUSTY, Zdenek (Brno); VEJSADA, Frantisek (Ceske Budejovice); LEPIL
Oldrich (Gottwaldov); KOUBOVA, Miroslava (Karlovy Vary);
~~KOMJAS~~, Ladislav (Nitra); HRADECKY, Frantisek (Praha);
KIRIN, Tomas (Zvolen)

Report on the activity of branches of the Association of
Czechoslovak Mathematicians and Physicists. Pokroky mat fyz
astr 8 no.2:99-106 '63.

HUSTY, Zdenek (Brno); VESADA, Frantisek (Ceske Budejovice); BALEK, Vaclav (Karlovy Vary); DUMAJSKY, Lajoslav (Nitra); LIPIL, Oldrich (Pilsen); HORACEK, Rudolf (Olomouc); HULICKY, Frantisek (Prague); KALINA, Milada (Trnava); PROCHAZKA, Jiri (Usti nad Labem)

Reports from local organizations of the Union of Czechoslovak Mathematicians and Physicists. Pokroky mat fyz astr 9 no. 2:134-141 '64.

VEJSADA, Frantisek (Ceske Budejovice); LEPIL, Oldrich (Olomouc); HORACEK, Rudolf (Olomouc); KLATIL, Jiri (Plzen); STREKOZ, O. (Presov); PUCHAZKA, Jiri (Usti nad Labem); HEJNY, M. (Zilina)

Reports on the activity of the Branches of the Association of Czechoslovak Mathematicians and Physicists. Pokroky mat. fyz. mat. 9 no.4:260-266 '64.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000929320005-1

LEPIL, Oldrich

Annual conference of Czechoslovak physists. Lekky mat
fyz astr 9 no.6:382 '64.

APPROVED FOR RELEASE: 08/23/2000

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Li-P-100, A 5

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PHASE I BOOK EXPLOITATION SOV/5410

Tashkentskaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii. Tashkent, 1959.

Transl (Transactions of the Tashkent Conference on the Peaceful Use of Atomic Energy) v. 2. Tashkent, Izd-vo AN UFGSSR, 1960.
449 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk Uzbekskoy SSR.

Responsible Ed.: S. V. Stareodubtsev, Academician, Academy of Sciences Uzbek SSR. Editorial Board: A. A. Abdullaev, Candidate of Physics and Mathematics; D. M. Abdurazulov, Doctor of Medical Sciences; U. A. Arillov, Academician, Academy of Sciences Uzbek SSR; A. A. Brodskina, Candidate of Biological Sciences; V. N. Ivashov; G. S. Ibratova; A. Ye. Kiv; Ye. N. Lebedev, Candidate of Physics and Mathematics; A. I. Nikolayev, Candidate of Medical Sciences; D. Mishanov, Candidate of Medical Sciences; A. S. Sadykov, Corresponding Member, Academy of Sciences USSR, Academician, Academy of Sciences Uzbek SSR; Yu. N. Talashev,

Card 1/20

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Transactions of the Tashkent (Cont.)

SCV/5410

Candidate of Physics and Mathematics; Ya. Kh. Turakulov, Doctor of Biological Sciences. Ed.: R. I. Khamidov; Tech. Ed.: A. G. Babakhina.

PURPOSE : The publication is intended for scientific workers and specialists employed in enterprises where radioactive isotopes and nuclear radiation are used for research in chemical, biological, and technological fields.

COVERAGE: This collection of 133 articles represents the second volume of the Transactions of the Tashkent Conference on the Peaceful Uses of Atomic Energy. The individual articles deal with a wide range of problems in the field of nuclear radiation, including: production and chemical analysis of radioactive isotopes; investigation of the kinetics of chemical reactions by means of isotopes; application of spectral analysis for the manufacturing of radioactive preparations; radioactive methods for determining the content of elements in the rocks; and an analysis of methods for obtaining pure substances. Certain

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Transactions of the Tashkent (Cont.) SOV/5410

Instruments used, such as automatic regulators, flowmeters, level gauges, and high-sensitivity gamma-relays, are described. No personalities are mentioned. References follow individual articles.

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RADIOACTIVE ISOTOPES AND NUCLEAR RADIATION
IN ENGINEERING AND GEOLOGY

Lobanov, Ye. N. [Institut yadernoy fiziki UzSSR - Institute of Nuclear Physics AS UzSSR]. Application of Radioactive Isotopes and Nuclear Radiation in Uzbekistan 7

Taksar, I. M., and V. A. Yanushkovskiy [Institut fiziki AN Latv SSR - Institute of Physics AS Latvian SSR]. Problems of the Typification of Automatic-Control Apparatus Based on the Use of Radioactive Isotopes 9

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- Transactions of the Tashkent (Cont.)
- Khrushchev, V. G., A. S. Lepilin, U. Ya. Marguliz, S. M. Stepanov, L. I. Belen'kiy, T. V. Brodberg, and V. G. Ivliyev [Ministry of Health USSR]. Industrial Gamma-Plant for Sterilization of Medical Materials 170
- Karushchev, V. G., B. A. Rubin, L. V. Motlitskiy, A. I. Rytov, N. M. Chysin, U. Ya. Marguliz, V. S. Grammatikati, V. G. Vlasov, and A. V. Petrov [Ministry of Health USSR]. Gamma-Plant for Continuous Irradiation of Potatoes 182
- Prokof'yev, N. S. [Institut ekonomiki AN SSSR - Institute of Economics AS USSR]. Economic Efficiency of the Use of High-Capacity Gamma-Plants in the Light and Food Industry 192
- Abdullayev, A. A., Ye. M. Lobanov, A. P. Novikov, and A. A. Khaydarov [Institute of Nuclear Physics AS UzSSR]. Use of a Multichannel Scintillation Gamma-Spectrometer for the Analysis of Rock Specimens 199

Card 10/20

LEPILIN, A.Ya., inzhener.

Modification of 6--10kv expulsion-type arresters. Energetik ⁴
(MLRA 10:1)
no.12:23-24 D '56.
(Lightning protection)

LEPILIN, A. Ya., elektromekhanik

We have redesigned push-button calling devices. Avt., telem. i
sviaz' 5 no.1:31 Ja '61. (MIRA 14:3)

1. Astrakhanskaya signalizatsii i svyazi Privolzhskoy dorogi.
(Railroads--Communication systems)

LEPILIN, A.Ya., inzh.

Single-transformer 110/35/6 kv substation with a 7,500 kva power rating and 110 kv protective devices. Energetik 10 no.7:24-25 J1 '62.
(MIRA 15:7)

(Electric substations)

IEPILIN, A.Ya., inzh.

Reconstruction of an operating 110 kv. power transmission line.
Energetik 11 no. 12:18-19 D '63. (MIRA 17:5)

LEPILIN, A.Ya., inzh.

Concerning the use of deep entrances with 35/10/6 and 110/10/6 kv.
transformers. Prom.energ. 18 no.2:36-37 F '63. (MIRA 16:2)
(Electric power distribution) (Electric substations)

LEPILIN, A.Ya., inzh.

Mounting of power transmission lines with different carrying capacity (exceeding 1 kv.) on common poles. Energetik 11 no. 4:27 Ap '63. (MIRA 16:3)
(Electric lines--Overhead)

LEPILIN, A.Ya., inzh.

Method for decreasing the low voltage limit of tubular
fiber-bakelite 35-110 kv. dischargers. Energetik 11 no.4:27-28
(MIRA 16:3)
Ap '63.
(Electric protection) (Electric discharges)

LEPILIN, A.Ya., inzh.

Prevention of damages caused by the landing of large birds on
overhead power transmission lines. Energetik 11 no.2:20 F '63.
(MIRA 16:3)

(Electric lines--Overhead)

LEPILIN, A.Ya., inzh.

Disconnecting of a 110 kv. electric power transmission line
due to a grass fire in a reed swamp. Energetik 11 no. 3:17-18
Mr '63. (MIRA 16:4)

(Electric lines—Overhead)

LEPILIN, A.Ya., inzh.

Fire on a power transmission line tower caused by induced voltage. Energetik 10 no.9:26-27 S '62.

Damage of a wire on a 110 kv. power transmission line.
Ibid.:26-27 (MIRA 17:1)

LEPILIN, A.Ya., inzh.

Reconstruction of a 110 kv. two-circuit tower without interrupting the operation of the line. Energetik 12 no.1:27-28 Jn '64.

Causes of damages in a 35 kv. power transmission line in a mountainous region during poor meteorological conditions. Ibid.:33-34
(MIRA 17:3)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000929320005-1

URCILIN, R.Ya., inch.

Applicational limitations of ICM-35 transformer protectors.
Learjetik 12 no.2:18-19 F '64. (MIRA 17:4)

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CIA-RDP86-00513R000929320005-1

LEPILIN, A.Ya., inzh.

An accident in a 110 kv. overhead power transmission line. Energetik
12 no.7:32-33 J1 '64. (MIRA 17:9)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000929320005-1"

LEPILIN, A.Ya., inzh.

Protection of transformers using doubled IZN-35 protectors.
(MMA 12:8)
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KUREK, N.M., red.; SHERBAKOV, S.N., red.; ARSEM'YEV, L.B., red.;
BOBORYKIN, Ye.P., red.; VISHNEVSKIY, A.V., red.; GORCHAKOV, A.V.,
red. GUSHCHIN, V.M., red.; DRUZHININ, B.N., red.; LEPILINE, G.M.,
red.; PEREL'SHTEYN, N.L., red.; TESLYA-TESLEMKO, V.P., red.;
AGRANATOV, Yu.O., tekhn.red.

[Precast reinforced concrete members; planning and using] Sbornye
zhelazobetonnye konstruktsii; opyt proektirovaniia i primeneniia.
Moskva, TSentr. biuro tekhn.inform., 1958. 422 p. (MORA 11:5)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva.
Tekhnicheskoye upravleniya.
(Precast concrete construction)

IVANOV, Platon Ivanovich; RUMYANTSEVA, I.P., red.; LEPILIN, I.V.,
red.; SHCHEPTEVA, T.A., tekhn.red.

[Psychology] Psichologija. Izd.3. Moskva, Gos.uchebno-
pedagog.iзд-во M-va prosv.RSFSR, 1959. 402 p. (MIRA 12:7)
(Psychology)

LEPILIN, M.N., inzh., otv. za vypusk; STREL'NIKOV, A.K., inzh., red.;
KASPEROVICH, N.S., red. izd-va; UVAROVA, A.F., tekhn. red.

[Catalog of parts for the S3A automobile] Katalog detalei motornoi
koliaski S3A. Moskva, Mashgiz, 1961. 153 p. (MIRA 14:12)

1. Serpuknovskiy motozavod.
(Automobiles--Catalogs)

BULKIN, V. G. et al. U.S.S.R.

Composition of upper segments in the Nikitovka ore zone, Czechoslovakia
Ac. 112-1193-1196 N 162. (MIRA 1818)

I. Institute of Mineral Resources, Academy of Sciences of the
Ukrainian S.S.R., Kiev.

LEPILIN, R.S.

Methods for carrying out investigations on the separation of steam
in an operating boiler unit. Nauch.dokl.vys.shkoly; energ. no.4:
185-188 '58. (MIHA 12:5)

1. Rekomendovana kafedroy AIIIS Moskovskogo energeticheskogo instituta.
(Boilers)

PATSUKOV, N.G., doktor tekhn. nauk, prof.; LEPILIN, R.S., inzh.

Steam-purity recording instruments of the Moscow Power Engineering
Institute. Trudy MEI no.30:179-185 '58. (MIRA 12:5)

1. Moskovskiy ordena Lenina energeticheskiy institut, Kafedra
tekhnologii vedy i tepliva.
(Steam--Measurement)

LMPILIN, R.S.

Results of conducting an investigation of the separation scheme
with a submerged perforated shield on an industrial boiler.
Nauch.dokl.vys,shkoly; energ. no.2:245-250 '59.
(MIRA 13:1)

1. Rekomendovana kafedroy atomnykh elektrostantsiy Moskovskogo
energeticheskogo instituta.
(Boilers)

DEMENT'YEV, B.A.; LEPILIN, R.S.; LOGINOV, A.A.

Investigation of the hydrodynamics of bubbling of the steam and
water mixture at high altitudes. Nauch.dokl.vys.shkoly; energ.
(MIRA 13:1)
no.2:251-262 '59.

1. Rekomendovana kafedroy atomnykh elektrostantsiy Moskovskogo
energeticheskogo instituta.
(Hydrodynamics) (Bubbles)

LEPILIN, R. S., Cand Tech Sci (diss) -- "Investigation of the hydrodynamics of water volume in the presence of a large bubbling layer and under conditions of organized liquid movement". Moscow, 1960. 20 pp (Min Higher and Inter Spec Educ RSFSR, Moscow Order of Lenin Power Engineering Inst), 250 copies (KL No 12, 1960, 127)

LEPILIN, R.S., kand.tekhn.nauk

Modernization of the network of a desorption installation in the
All-Union Heat Engineering Institute. Energetik 11 no.2:
14-16 F '63. (MIRA 16:3)
(Desorption) (Feed-water purification)

S/181/61/003/001/037/042
B102/B204

AUTHORS: Bredov, M. M., Lepilin, V. A., Shestakov, I. B., and Shakh-Budagov, A. L.

TITLE: The effect produced by the type of ions upon the character of the change in the electrical properties of a semiconductor surface during its irradiation by ions of medium energy

PERIODICAL: Fizika tverdogo tela, v. 3, no. 1, 1961, 267-274

TEXT: The effect produced by ion bombardment upon the surface properties of semiconductors has hitherto not been sufficiently investigated; above all, nothing is known about the effect produced by the type of ions, i. e., the most contradictory opinions have been expressed (Refs. 2 and 4). A study of these questions is of both basic and practical value. If, e.g., the effect of bombardment does not depend on the type of ions, the effect would have to be considered to be purely microthermal, and in the opposite case, to be microchemical. Experiments, described in earlier

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The effect produced by the type of ions...

papers uniquely proved that different effects are produced by different ions. The present paper deals with a study of the volt-ampère characteristics of W-Ge and W-Si point contacts in the irradiation with atomic oxygen ions and molecular nitrogen ions of 5 and 10 kev. The experimental conditions were chosen in such a manner that an answer to the especially interesting questions (change in carrier mobility, carrier concentration of the scattering centers) could be expected. Theoretical considerations in this direction are discussed in detail; they led to the conclusion that an investigation of the volt-ampère characteristics of point contacts (investigation of direct and reverse currents and of the rectification constant between semiconductor and metal may supply the required information in a bombardment with ions of 5-10 kev. The radiation dose was varied within the range of from 10^{11} - 10^{15} ions/cm². The experiments were carried out by means of the mass separator described in Ref. 3. The ion source was gaseous (impact ionization); the irradiated specimens were n-type Ge and Si single crystals with a concentration ratio of the carriers of $n/n_0 = 1 \cdot 10^{-9}$ and $7 \cdot 10^{-9}$, respectively. The individual measurements were repeated with due

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The effect produced by the type of ions...

frequency in order to keep the statistical error at a minimum. The results were evaluated according to M. O. Kornfel'd. Measurements are illustrated in Figs. 3 and 4. Fig. 3 shows the ratio of the rectification constant after irradiation to its value before irradiation as a function of the radiation dose for 5- and 10-kev ions. The difference between the effect of O and N₂ ions is obvious. Whereas N₂ ions do not change the carrier concentration considerably and increase the defect density only slightly (thus somewhat increasing the ohmic resistance), O ions increase the rectification constant (i.e., by forming a p-n junction in the "active zone" of the specimens, because the penetrating oxygen atoms act as acceptors). The rectification constant has a maximum at a certain dose (which is due either to a removal of the region of defect-carrier equilibrium from the active zone of the probe, or to an increase of the lattice defects, or to both). Fig. 4 shows the dependence of direct and reverse currents and rectification constant on the radiation dose N_0 (irradiation by 10-kev O and N₂ ions). The true value lies in the hatched region. There are 4 figures, 1 table, and 10 references: 5 Soviet-bloc and 5 non-Soviet-bloc.

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REZNIKOV, Naum Iosifovich; LEFILIN, Vasiliy Ivanovich; PETROFOL'-SKAYA, N.Ye., red.; DURAKSOVA, V.M., tekhn. red.

[Efficient machining of TSAM4-1 zinc alloy] Proizvoditel'-naia obrabotka tsinkovogo splava TSAM4-1. Kuibyshev, Kuybyshevskoe knizhnoe izd-vo, 1962. 60 p. (MIRA 15:7)
(Zinc alloys) (Metalwork)